GHIZELLE JANE ABARRO

MATERIALS & FAILURE ANALYSIS ENGINEER

CONTACT

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Laguna, Philippines

PROFILE

- Holds a bachelors & masters degree in Materials Science and has almost 3 years of experience in both management and R&D
- Currently in-charge of failure analysis and materials selection, characterization and qualification
- Has strong oral and technical writing skills resulting to several publications and a best presenter award
- Deep interest in aerospace field – conducted a study on materials for cosmic radiation shielding and audits related online courses

EDUCATION

M.Sc. in MATERIALS SCI. & ENGINEERING
(2013 – 2015)
University of the Philippines Diliman
ERDT Full Scholarship Awardee
Summa Cum Laude Equivalent (3.795 GPA)
Thesis: Benzoxazine synthesis from waste lignin

B.Sc. in MATERIALS ENGINEERING
(2008 – 2013)
University of the Philippines Diliman
Graduated Cum Laude (2.965 GPA)
Thesis: Abaca & MMT-reinforced UP Composite

SKILLS

Materials Characterization

Failure & Root Cause Analysis

SEM and SAT Imaging

EDS, DSC, TGA, FT-IR Analysis

Technical Writing

Public Speaking

DMAIC problem solving

Polymer Synthesis

Composite Materials Fabrication

WORK EXPERIENCE

PACKAGE DEVELOPMENT ENGINEER
Sep 2016 – present (ON Semiconductor Philippines, Inc.)

- Assigned subject-matter-expert on Materials Science for package development of new devices; facilitates selection and qualification of metallic and polymer components (i.e. adhesive, mold compound, lead frame, wire materials and cleaning chemicals)
- Point-person for failure analysis of devices in their prototype stage and reverse engineering of competitor units; trains interns and operators on non-destructive and destructive techniques and corresponding equipment for each
- Established batch plasma cleaning process for improved bonding; currently engineering a method of improving mold compound selection based on probability of delamination occurrence.
- Won "Employee of the Quarter for Engineering Excellence".

MANAGEMENT ASSOCIATE
Sep 2015 – Sep 2016 (First Philec, Inc.)

1-year training plan designed to build my business acumen and complement my engineering background; through assignments in non-engineering teams:

A. Business Development Team (5.5 months)
- researched on patent and trademark applications of new products
- led the formation of company's academe linkages to support the R&D of new products
- led the statutory and technical aspects of renewable energy-based microgrid systems for both industrial and off-grid settings; collaborating with government offices, international experts and local partner companies.

B. Human Resources Team (4 months)
- managed "Project Coffee Bean", an initiative for organizational development which involves (a) integrated business planning, (b) business process improvement and (c) organizational restructuring.
- Led talent acquisition in building the organizational structure that will support the new business processes.

PUBLICATIONS

Benzoxazines with Enhanced Thermal Stability from Phenolated Organosolv Lignin
First author, ***RSC Adv.***, 2016

Qualitative & Quantitative Study of Flux-Clean Solution for Smart High-side Device
First author, ***IEEE Xplore.***, 2017

Batch Microwave Plasma for Robustification of Automotive Devices: An Alternative to Strip-type Radiofrequency Plasma
First author *(Pending Publication)*

Development of Hydrogen-rich Benzoxazine Resins with Low Polymerization Temperature for Space Radiation Shielding
Co-author *(Pending Publication)*

REFERENCES

Alvin Denoyo
Project Manager (Automotive Devices)
New Package Development
ON Semiconductor Philippines, Inc.
Alvin.Denoyo@onsemi.com

Hatsuo Ishida, PhD.
Professor, Dept. of Macromolecular Science & Engineering
Case Western Reserve University
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Leslie Joy Diaz, Dr. Eng.
Professor and Former Chairman,
Dept. of Mining, Metallurgical & Materials Engineering
University of the Philippines-Diliman
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RESEARCH & INTERNSHIP

VISITING SCHOLAR
May – Oct 2014 (Prof. Hatsuo Ishida's Laboratory at Dept. of Macromolecular Science & Engineering, Case Western Reserve University in Ohio, USA)

- 2014 ERDT Sandwich Program Awardee. Training in polymer synthesis; extensive immersion in equipments & techniques used for polymer characterization (e.g. TGA, DSC, in-situ FT-IR, 1H-NMR, Gas Pycnometer)
- Worked two projects to completion within 6 months: (a) benzoxazine synthesis from renewable materials and (b) H-rich benzoxazine synthesis for cosmic radiation shielding

FAILURE ANALYSIS INTERN
Apr – May 2012 (ON Semiconductor Philippines, Inc)

- Training on SEM imaging, C-SAM, FT-IR, TGA, DSC, TMA, decapsulation. Performed failure analysis on various failed military & medical ICs.

CONFERENCES

ETF 2017 (Engineering Technical Forum)
(organized by ON Semiconductor, oral presentation, Phoenix, AZ)

EPTC 2017 (19th Electronics Packaging Technology Conference)
(organized by IEEE, poster presentation, Singapore)

ICEP-IAAC 2018 (International Conference on Electronics Packaging and iMAPS All Asia Conference)
(organized by IEEE, poster presentation, Japan)

ANTS 2018 (28th ASEMEP National Technical Symposium)
(organized by ASEMEP, oral presentation, Philippines)
(awarded best presenter, nominated best paper)

OTHER INTERESTS

- Certified in Lean Six Sigma – Green Belt (awaiting graduation)
- Has a certificate in *Solid State Chemistry* from Massachussetts Institute of Technology via www.edx.org (2013)
- Currently auditing an online course: *Introduction to Aerospace Engineering: Aeronautics & Human Spaceflight* via www.edx.org
- Reviewer for Journal of Mechanics Engineering and Automation
- Self-taught in the French language (elementary level)
- Did private tutorials for grade school and high school students